High Level

Architecture Rules

Integrated Training Program

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HLA Rules

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- **Ten basic rules that define the responsibilities and relationships among the components of an HLA federation**
  - **Five rules apply to federations**
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Federation Rules

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- **Rule 1:**
  - **Federations shall have an HLA Federation Object Model (FOM), documented in accordance with the HLA Object Model Template (OMT)**
- **Rule 2:**
  - **In a federation, all object representation shall be in the federates, not in the runtime infrastructure (RTI)**
- **Rule 3:**
  - **During a federation execution, all exchange of FOM data among federates shall occur via the RTI**

Federation Rules

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- **Rule 4:**
  - **During a federation execution, federates shall interact with the runtime infrastructure (RTI) in accordance with the HLA interface specification**
- **Rule 5:**
  - **During a federation execution, an attribute of an instance of an object shall be owned by only one federate at any given time**

Federate Rules

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- **Rule 6:**
  - Federates shall have an HLA Simulation Object Model (SOM), documented in accordance with the HLA Object Model Template (OMT)
    - Each simulation must describe the functionality it is able to provide to a federation in OMT terms
    - All SOM objects, attributes and interactions may not be used in any given federation
      - SOM describes the array of options available

Federate Rules

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- **Rules 7 - 9: Federates have to abide by the provisions of their SOM**
  - **Federates shall be able to update and/or reflect any attributes of objects in their SOM and send and/or receive SOM object interactions externally, as specified in their SOM. (Rule 7)**
  - **Federates shall be able to transfer and/or accept ownership of attributes dynamically during a federation execution, as specified in their SOM. (Rule 8)**
  - **Federates shall be able to vary the conditions (e.g., thresholds) under which they provide updates of attributes of objects, as specified in their SOM. (Rule 9)**

Federate Rules

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- **Rule 10: Time Management**
  - **Federates shall be able to manage local time in a way which will allow them to coordinate data exchange with other members of a federation.**
    - **Simulations in a federation must manage time so that there appears to be one clock**
    - **Internally, a simulation manages time any way it wishes, as long is it meets commitments to other simulations in the federation**